

ENGINEERING DEPT.		PRODUCT SPECIFICATION For CI21 Series Connector System	SPEC.NO.: SPCI004H
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1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire

2. APPLICABLE STANDARDS:

MIL - STD - 202	Methods for test of connectors for electronic equipment
EIA - 364	Test methods for electrical connectors
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: CI21 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 0.8 mm (.031") ~ 1.6 mm (.063")

6.2 P.C. Board Layout: See attached drawings

REVIEWED : Eisley APPROVED : Sun VERIFIED : Michelle .

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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		3A 250V AC (r.m.s.)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 100 mA max.	Less than 20 mΩ
7.3	Dielectric strength	When applied AC 1000 V 1 minute between adjacent terminal	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#24~#28
8.2	Terminal crimp Tensile strength	When crimped AWG#24 size wire When crimped AWG#26 size wire When crimped AWG#28 size wire	More than 3.0 Kgf More than 2.0 Kgf More than 1.3 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 700 gram
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 1.5 Kgf
8.5	Single contact insertion force	Measure force to insertion using 0.64 mm square pin at speed 25± 3 mm per minute	700 gram max.
8.6	Single contact withdrawal force	Measure force to withdrawal using 0.64 mm square pin at speed 25± 3 mm per minute	100 gram min.
8.7	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial
8.8	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 1.0 Kgf

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30° C max.
9.2	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions	Appearance: No damage Discontinuity: 1 micro second max.

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	ITEM	TEST CONDITION	REQUIREMENT
9.3	Solder ability	Tin-Lead Process: Soldering time: 5 ± 0.5 second Soldering pot: $230 \pm 5^\circ\text{C}$ Lead-Free Process: Soldering time: 3 ± 0.5 second Soldering pot: $245 \pm 5^\circ\text{C}$	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	Tin-Lead Process: Soldering time: 5 ± 0.5 second Soldering pot: $240 \pm 5^\circ\text{C}$ Lead-Free Process Soldering time: 5 ± 0.5 second Soldering pot: $260 \pm 5^\circ\text{C}$	No damage
9.5	Heat aging	$85 \pm 2^\circ\text{C}$, 96 hours	No damage
9.6	Humidity	$40 \pm 2^\circ\text{C}$, 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than twice of initial Dielectric strength: To pass para 7-3
9.7	Temperature cycling	One cycle consists of : (1)- 55^{+0}_{-3} °C , 30 min. (2)Room temp. 10-15 min. (3) 85^{+3}_{-0} °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial

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	ITEM	TEST CONDITION	REQUIREMENT
9.8	Salt spray	<p>Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated)</p> <p>Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water and dried naturally, after which the specified measurements shall be performed.</p> <p>The specimens shall be suspended from the top using waxed twine, string or nylon thread.</p> <p>The test only define the plating area, without plating area (as copper cross section) will not be defined.</p> <p>(EIA 364-26B / MIL-STD-202 Method 101)</p>	<p>Appearance: No damage Contact resistance: Less than twice of initial</p>

10. AMBIENT TEMPERATURE RANGE: -25 to $+85^{\circ}\text{C}$

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11. Insertion Force and Withdrawal Force :

11.1 Test method:

Housing with crimped contacts and a header shall be mated and unmated on the same axis.

11.2 Requirements:

Unit: Kgf

No. of circuits	Insertion Force (Max.)	Withdrawal Force (Min.)
2	3.0	0.5
3	4.0	1.0
4	5.0	1.0
5	6.0	1.5
6	6.0	1.5
7	7.0	2.0
8	7.0	2.0
9	8.0	3.0
10	8.0	3.0
11	10.0	3.5
12	10.0	3.5
13	10.0	4.0
14	11.0	4.0
15	11.0	5.0